Vladimír Velebný – CEO, Contipro, Czech Republic

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Vladimír Velebný, founder and CEO, celebrates his 30th anniversary heading Contipro, a mid-sized company with deep experience in R&D surrounding their star product, hyaluronic acid. Whilst breaking down the components of such a powerful and universal material, he points out that it is, in fact, an extremely simple substance; its potential lies in how the substance is handled. Velebný also shares details about his internationalization strategy as well as his service offering as a CDMO.

Vladimír, what are the achievements that have had the biggest impact on Contipro's success since we last met with you in 2016?

One of our key milestones, considering that our activities are based on the production of raw materials for cosmetics, nutrition, and pharma, has been the establishment of a new production line to produce very pure hyaluronic acid for these business areas nearly three years ago. Not only is the capacity of this production line very high, but also the quality of the product, which is comparable with that of our best competitors.

Another milestone has been an outstanding increase in hyaluronic acid production in the area of cosmetics, which we doubled this year.

Furthermore, we penetrated the veterinary market with joint nutritional supplements designed for the care of the musculoskeletal system of horses and other animals. As an innovative company, we decided to launch a product that was new in its composition as well as in its shape, taste, and so

on. We launched something completely different from what there was on the market already.

Can you introduce the main characteristics of hyaluronic acid and the key therapeutic areas your clients use it for?

Hyaluronic acid is actually a very simple polysaccharide. The reason why it is powerful lies in the way it organizes the tissue structure: collagen fibers, elastic fibres in the skin, fragments that can occur in the tissue after an injury, inflammation, etc. It acts as a group of informative molecules that penetrate through the tissue and activate immunocompetence cells to defend the organism. Immunocompetence cells also clean wounds, and short fragments of hyaluronic acid are responsible for this. Hyaluronic acid is very simple in itself, but a powerful activator.

In pharma, the demand of hyaluronic acid has been increasing slightly. However, in cosmetics, it has boomed, which has impacted positively on our production and thus our profit.

After the success of Hyiodine, quickly recognized as one of the most effective products on the market for chronic and complicated wounds, and the launch of Sorelex, what does your product pipeline look like now?

Our product pipeline has been affected by some regulatory changes at a European level in the context of the CE mark certification. The provision of this certification has practically been stopped.

At Contipro, we are good at nanotechnology and the application of nanotechnology in medicine, especially in wound healing, and we have developed new treatments, for instance, in stomatology. Currently, we have five ready-made products waiting to obtain the CE mark to be launched, but it can take between a year and a half and two years until the authorization bodies provide it.

Fortunately, our business model is not dependent on medical devices alone, which allows us to continue growing. However, while we believe that this situation will improve in upcoming years, we view this as a severe and dangerous problem for small companies that invest in production of medical devices and do not see any money coming back in due to not being able to launch products on the market.

Within the nanotechnology sphere, what opportunities did the device 4SPIN®, used to produce nanofibers, bring to Contipro?

4SPIN was our first device to produce nanofibers, allowing us to produce both 2D and 3D nanostructures and microstructures. It is used in our different fields of research and development. When we first developed it, the idea was to use it internally. Today, we also sell a few devices per year.

In addition to nanofibers, we produce microfibers. The difference between the two is subtle but significant. Whereas the properties of nanofibers are very effective for some applications, on their own the desorption is too quick for some wounds. Therefore, we developed microfibers, whose active substance release is slower. Putting these two together is the future of wound healing and we are the first in the world to produce such microfibers. The next step is to fabricate cotton made of hyaluronic acid for open or profound wounds so that the cotton does not need to be removed the way regular cotton would need to be. We can play with several parameters, such as the speed of the solubilization, to adjust the treatment to each wound.

How do you continue to ensure and improve your position as one of the top three largest producers of hyaluronic acid worldwide?

Our greatest advantage against our competitors is that we focus our research and development activities on the shape and design of the materials, which is exceptional and an innovative point of view for the patients. We have nanofibers, microfibers, and textiles, among others, and they are all made from hyaluronic acid. They are non-irritating substances that disappear into organisms and are completely dissolved.

The current share of R&D and innovation expenditure in the Czech Republic is 1.79 percent of GDP. In February, the Government approved the “Innovation Strategy of the Czech Republic 2019–2030,” which aims to increase R&D funding year on year. How would you evaluate these efforts to foster innovation in the Czech Republic?

When it comes to the academic environment — universities, research institutes, etc. science in the Czech Republic is supported very strongly, more now than ever before. However, for companies, the situation is more difficult. When we receive funding from the government, for example, tax exemptions for R&D spending, we must provide reports that involve a lot of bureaucracy. If there

are any mistakes in this paperwork, it needs to be redone and resubmitted, which costs the company money every time. For this reason, we decided to do without the government’s support as currently we see no benefit to our operations.

Can you give us an update on your internationalization strategy?

We now have affiliates in Russia, Germany, and France, and the US is next in the pipeline: we will establish an office there next year. Moreover, we plan to have a subsidiary in South East Asia too.

In addition to our subsidiaries, we decided to establish product incubators for start-up companies. To develop a new pharmaceutical product, the infrastructure needs to be established, and companies need a lab, special machinery, and several other elements. Incubators do not generally offer all these facilities and often, companies get in touch with us requesting help in this regard. As a result, we cooperate with companies and we produce the advanced raw material of hyaluronic acid, or derivatives of it for them. Some of these companies are small, others are big multinationals. Whatever the size, we do not compete with them, and the cooperation is always vertical, not horizontal, given that some of these businesses are our competitors.

For small companies, our product incubators are sometimes the only feasible help as they have the idea, and we have the raw material as well as the equipment to make it a reality. Such collaborations occasionally lead to interesting experiments which we are happy to help develop in our facilities.

What are the key efforts Contipro is putting into creating a healthier future?

We are concentrated on wound healing, mainly bed sores, ulcers, and injuries that can be extremely unpleasant and can lead to dangerous situations for the patient. The two products that are on the market now are very successful in healing such wounds. Thus, we will continue developing these types of products.

In January 2019 we started with the development of new regenerative medicine products in the tissue engineering space, which we would like to continue with. At present, we are working on a special hydrogel and, like everything at Contipro, it is based on hyaluronan. With this, we might be able to prepare, for instance, tissue sheets for implantation.

Then, we would like to continue down the technological path to get closer and closer to understanding fully the biology of human tissue. It is not a problem for many laboratories to print out human tissue based on artificial synthetic polymers, but it is challenging to go one step further and obtain a biological function for their creation. We want to develop a system that allows us to connect different macromolecules that exist in the tissue biologically, not chemically.

Although we are focused on different parts of medicine, our main focus is regenerative medicine, wound healing and delivery systems, and these can certainly have a meaningful impact on the population’s health.

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